# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No.: CTCE/BBMP/W.No.06/HSN/WMM/Gradation/2013-14 18.12.2013

## GRADATION FOR WMM
## MORTH TABLE-400-11

**Customer** : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

**Agency** : **Mr. H.S. Nataraj,** Contractor, Bangalore.

**Name of Work** : Filling of pot hole in Ward No. 06, Byatarayanapura Sub Division, BBMP, Bangalore.

**Reference** : EE/BTP/BBMP/E-TND/449/2012-13 Dated: 16.03.2013

Date of Testing : 18.12.2013

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **7540**

| Is Sieve Size in mm | Weight Retained (gm) | Cumulative Weight Retained (gm) | Cumulative % of Retained | Cumulative % of Passing | Spec.Limits |
|---|---|---|---|---|---|
| 53 | 0 | 0 | 0 | 100 | 100 |
| 45 | 215 | 215 | 2.9 | 97.1 | 95-100 |
| 22.4 | 2595 | 2810 | 37.3 | 62.7 | 60-80 |
| 11.2 | 1425 | 4235 | 56.2 | 43.8 | 40-60 |
| 4.75 | 835 | 5070 | 67.2 | 32.8 | 25-40 |
| 2.36 | 940 | 6010 | 79.7 | 20.3 | 15-30 |
| 0.600 | 590 | 6600 | 87.5 | 12.5 | 8-22 |
| 0.075 | 520 | 7120 | 94.4 | 5.6 | 0-8 |

**Note:**

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

M/s. Civil-Tech Consultants & Engineers
# 23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

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Job No: CTCE/BBMP/W.No.06/HSN/BC/Bitumen/2013-14 27.12.2013

## BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

**As per IS : 2386 and IRC : SP : 11 - 1984**

| | |
|---|---|
| CLIENT | **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore. |
| AGENCY | **Mr. H.S. Nataraj,** Contractor, Bangalore. |
| NAME OF THE WORK | Filling of pot hole in Ward No. 06, Byatarayanapura Sub Division, BBMP, Bangalore. |
| REFERENCE | EE/BTP/BBMP/E-TND/449/2012-13 Dated: 16.03.2013 |
| SAMPLE I/D | Pot hole filling in Ward No. 06 |
| DATE OF TESTING | 27.12.2013 |

### BITUMEN CONTENT DETERMINATION

| Description | Sample 1 | Sample 2 |
|---|---|---|
| 1. Weight of Mixture before Test, g | 500 | 500 |
| 2. Weight of Mixture after Test, g | 474.5 | 474 |
| 3. Weight of Asphalt and Mineral matter Extracted, g | 25.5 | 26 |
| 4. Weight of Mineral Matter, g. | - | - |
| 5. Weight of Ash, g | - | - |
| 6. Weight of Bitumen Extracted, g. (corrected) | 25.5 | 26.00 |
| 7. Bitumen content in % | 5.10 | 5.20 |
| 8. Average | **5.15** | |

### GRADATION AFTER EXTRACTION

TABLE - 1

| SIEVE SIZE | Percent Passing, % | | JOBMIX |
|---|---|---|---|
| mm | Sample 1 | Sample 2 | Gradation |
| 19 | 100.00 | 100.00 | 100 |
| 13.2 | 92.65 | 93.45 | 79-100 |
| 9.5 | 78.25 | 79.20 | 70-88 |
| 4.75 | 65.30 | 59.50 | 53-71 |
| 2.36 | 54.85 | 48.60 | 42-58 |
| 1.18 | 42.10 | 43.15 | 34-48 |
| 0.6 | 29.35 | 32.25 | 26-38 |
| 0.3 | 26.15 | 22.55 | 18-28 |
| 0.15 | 15.20 | 14.20 | 12-20 |
| 0.075 | 5.80 | 6.20 | 4-10 |

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#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com